B1 Cancel

FIG. 10 is a view of a holder for supporting a region of the capillaries in a side-by-side relationship.--

Insert at column 4, after line 65 (which reads "time measurements"):

B1 Cont'd

--An exemplary confocal fluorescence detection system for use with capillary arrays is shown in FIG. 9. An argon ion laser (Model 2020, Spectra-Physics, Mountain View, Calif.), not shown, is used as the excitation source. The laser beam is expanded to 5 mm diameter, collimated, and then directed through a 32 X, N.A. 0.4 infinite conjugate objective 11 (LD Plan-Achromat 440850, Carl Zeiss, West Germany) by a long-pass dichroic beamsplitter 12 (480 DM, Omega Optical, Brattleboro, Vt.). The dichroic beam splitter 12 reflects the excitation laser beam into the objective 11 but transmits fluorescent light collected by the objective which is Stokes shifted to longer wavelengths. The objective focuses the exciting laser on the sample and gathers the fluorescence with very high collection efficiency. The use of an infinite conjugate objective permits vertical adjustment of the probe volume by translating the objective with the mount 13 secured to the base 14 with no significant perturbation of the optical alignment. The focused 1 mW, 488 nm wavelength beam is focused to a 10 μm beam diameter and a 25 μm confocal beam parameter. The fluorescence emission is passed back through the long-pass dichroic beam splitter 12 mounted on the base 14 to reduce laser interference and to separate the excitation and detection paths. The fluorescence is then focused by a 75 mm focal length lens 16 mounted on the base 14 onto a 400 μm pinhole which serves as the confocal spatial filter. The light passing through the pinhole is filtered by a 488 nm rejection band filter (488 RB filter, Omega Optical, Brattleboro, Vt.), a long-pass cutoff filter (Schott GG-495, Esco, Oakridge, N.J.), a bandpass

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

fluorescence filter (530 DF60, Omega Optical, Brattleboro, Vt.), all mounted within the housing 17, followed by detection with a cooled photomultiplier tube 18 (RCA 31034A, Burle Industries, Lancaster, Pa.). The spatial filter, the optical filters and photomultiplier tube are mounted on base 14. The output of the phototube is amplified and filtered with a low-noise amplifier (SR560, Standford Research Systems, Sunnyvale, Calif.), digitized with a 12 bit analog-to-digital board (DASH-16 F, metra-Byte, Taunton, Mass.) and stored in an IBM PS/2 microcomputer. The capillary array comprises a plurality of capillaries 21 having their ends 22, 23 extending into wells 24, 26 between which a high voltage is applied for electrophoresis. The ends 22 may be separated for individual manipulation and loading. A portion 27 of the capillaries is maintained in side-by-side parallel coplanar relationship by a holder 28, FIG. 10. The holder 28 includes a window 32 through which the beam can be focused on the interior volume of the capillaries. The holder 28 is mounted on a translation stage 30 (Model 4000, Design Components, Franklin, Mass.), which is actuated by stepper motor 31 (see FIG. 9).--

**IN THE DRAWINGS:**

Please add new figures 9 and 10, which are provided with the concurrently filed Request for Approval of Drawing Change.

**IN THE CLAIMS:**

Please replace, without prejudice or disclaimer, claims 1, 3, 4, 16, 17, 23, 25, 31, 45, and 52, with amended claims 1, 3, 4, 16, 17, 23, 25, 31, 45, and 52, as follows:

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com